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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---------------------------------------|-----------------------|---------------------|------------------|
| 10/643,361 | 08/19/2003 | James Charles Bohling | A01410 | 4833 |
| 21898 7590 12/19/2006 ROHM AND HAAS COMPANY PATENT DEPARTMENT | | | \ EXAMINER | |
| | | | BADIO, BARBARA P | |
| | DENCE MALL WEST IIA, PA 19106-2399 | | ART UNIT | PAPER NUMBER |
| | | | 1617 | • |
| SHORTENED STATUTOR | Y PERIOD OF RESPONSE | MAIL DATE | DELIVER | Y MODE |
| 3 MO | NTHS | 12/19/2006 | · PAPER | |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | Application No. | Applicant(s) | | | |
|--|---|--|--|--|--|
| | 10/643,361 | BOHLING ET AL. | | | |
| Office Action Summary | Examiner | Art Unit | | | |
| | Barbara P. Badio, Ph.D. | 1617 | | | |
| The MAILING DATE of this communication app Period for Reply | ears on the cover sheet with the c | orrespondence address | | | |
| A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period w - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b). | TE OF THIS COMMUNICATION 6(a). In no event, however, may a reply be tim ill apply and will expire SIX (6) MONTHS from cause the application to become ABANDONEI | N. sely filed the mailing date of this communication. D (35 U.S.C. § 133). | | | |
| Status | | | | | |
| 1) Responsive to communication(s) filed on | Responsive to communication(s) filed on | | | | |
| | · · · · · · · · · · · · · · · · · · · | | | | |
| 3) Since this application is in condition for allowan | Since this application is in condition for allowance except for formal matters, prosecution as to the merits is | | | | |
| closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. | | | | | |
| Disposition of Claims | | | | | |
| 4) ☐ Claim(s) 1 and 3-5 is/are pending in the application 4a) Of the above claim(s) is/are withdraw 5) ☐ Claim(s) is/are allowed. 6) ☐ Claim(s) 1 and 3-5 is/are rejected. 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction and/or | n from consideration. | | | | |
| Application Papers | | | | | |
| 9) The specification is objected to by the Examiner 10) The drawing(s) filed on is/are: a) access applicant may not request that any objection to the of Replacement drawing sheet(s) including the correction of the original than the correction of the correct | epted or b) objected to by the Edrawing(s) be held in abeyance. See on is required if the drawing(s) is obj | e 37 CFR 1.85(a). ected to. See 37 CFR 1.121(d). | | | |
| Priority under 35 U.S.C. § 119 | | | | | |
| 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. | | | | | |
| Attachment(s) | | | | | |
| 1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date | 4) Interview Summary Paper No(s)/Mail Da 5) Notice of Informal Pa | ite | | | |

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Final Office Action on the Merits

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

- 2. The rejection of claim 2 under 35 USC 103(a) over Webber et al. (US 5,563,220), Sanghvi et al. (US 6,239,220), Stockel et al. (US 4,031,110) and Nagle et al. in combination is made moot by the cancellation of the instant claim.
- 3. The rejection of claims 1 and 3-5 under 35 USC 103(a) over Webber et al. (US 5,563,220), Sanghvi et al. (US 6,239,220), Stockel et al. (US 4,031,110) and Nagle et al. in combination is maintained.

Applicant argues the cited art lacks motivation to combine. According to applicant, (a) Webber does not teach or suggest adding an amide containing catalyst to the reaction; (b) Stockel and Nagle do not provide disclosures for said addition in the context of the claimed invention; (c) the process taught by Stockel is nonanalogous because the cited reference teaches the production of 3,3-bis(chloromethyl)oxetane; (d) Nagle teaches away from the use of polar solvents as recited by the instant claims and (e) the use of Sanghvi is improper because the reference teaches a process for the recovery of triarylmethyl halide protecting groups that were cleaved during

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oligonucleotide synthesis. Applicant's argument was considered but not persuasive for the following reasons.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

The claimed invention is a process for converting a supported trityl alcohol to the corresponding trityl chloride by (a) dispersing an organic solvent and a supported trityl alcohol in a reaction vessel; (b) adding an amide containing catalyst to said vessel; (c) adding a halogenating agent to said vessel and (d) filtering and draining each step and obtaining the corresponding supported trityl chloride.

Each of the cited prior art teaches a process for converting an alcohol group to a halide group in the presence of a halogenating agent and, thus, each is analogous art (see the portion of each cited in the previous Office Action).

The process taught by Webber differs from the claimed process in the absence of the addition of an amide containing catalyst. However, each of Stockel and Nagle teaches the combination of an amide and a halogenating agent in the conversion of an alcohol to the corresponding halogenated compound. In addition, Nagle teaches the addition of an amide containing compound accelerates the reaction through the Vilsmeier-Haack type complex. Thus, the addition of an amide catalyst to the process taught by Webber would be prima facie obvious. Sanghvi, in addition to its teaching of

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a process for the conversion of an alcohol to the corresponding halogenated compound, was utilized for the teaching of equivalence between the different halogenating agents taught by the other cited references.

Applicant also argues Nagle teaches away from the use of polar solvents. It is noted that the reference teaches nonpolar solvents are preferred and not that the reaction would not run in the presence of polar solvents. In addition, Webber and Sanghvi teach the use of polar solvents. Therefore, the use of polar solvents would be obvious to the skilled artisan in the art.

Lastly, applicant argues Stockel teaches N,N-disubstituted formamides as a reagent in the reaction and not as a catalyst. However, the classification of the compound is irrelevant. The relevant issue is the teaching by Stockel of a process of converting an alcohol to the corresponding halogenated compound utilizing a reagent formed by reacting said N,N-disubstituted formamide with a halogenating agent. It should be noted that Nagle teaches a similar process and the fact that said N,N-disubstituted formamide is a catalyst.

For these reasons and those given in the previous Office Action, the rejection of claims 1 and 3-5 under 35 USC 103(a) over Webber et al. (US 5,563,220), Sanghvi et al. (US 6,239,220), Stockel et al. (US 4,031,110) and Nagle et al. in combination is maintained.

Conclusion

4. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Telephone Inquiry

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara P. Badio, Ph.D. whose telephone number is 571-272-0609. The examiner can normally be reached on M-F from 6:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreenivasan Padmanabhan can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval.(PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Barbara P. Badio, Ph.D.
Primary Examiner

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BB December 14, 2006